UTILISATION OF CONTRACEPTIVE SERVICES AMONG PEOPLE LIVING WITH HIV/AIDS AT THE PRESIDENT'S EMERGENCY PLAN FOR AIDS RELIEF CLINIC ADEOYO MATERNITY TEACHING HOSPITAL, IBADAN, NIGERIA

BY

Bashirat Abiola GIWA
B.Ed HEALTH EDUCATION (IBADAN)
MATRIC NO: 153573

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CERTIFICATION

I certify that this work was carried out by Bashirat Abiola GIWA in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan, Nigeria.

SUPERVISOR

Professor A. J. Ajuwon

B. Sc (Lagos), MPH, PhD (Ibadan)

Department of Health Promotion and Education,

Faculty of Public Health, College of Medicine,

University of Ibadan, Ibadan, Nigeria.

DEDICATION

This project is dedicated to Almighty Allah for His protection, blessings and mercies throughout the course of my study to enable me to produce this work.

Also to my family for their moral, spiritual and financial support, may God continue to bless us all (Amen).

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ABSTRACT

Utilisation of contraceptive services especially among People Living With HIV/AIDS (PLWHA) has emerged as a means to prevent unintended pregnancy and transmission of HIV. Previous studies have not adequately investigated the use of contraceptives among PLWHA. Lack of contraceptive utilisation has contributed to the rise in unintended pregnancies and mother-to child transmission of the virus. This study was therefore designed to investigate the utilisation of contraceptive services among PLWHA at the President's Emergency Plan for AIDS Relief (PEPFAR) clinic, Adeoyo Maternity Teaching Hospital, Ibadan, Nigeria.

The study was descriptive cross-sectional in design using a systematic random sampling technique. A total of 365 respondents were interviewed using a semi-structured interviewer-administered questionnaire which included socio-demographic characteristics, 18-point knowledge and 10-point perception of contraception scales. Knowledge scores ≤6, >6-12 and >12 were categorised as poor, fair and good respectively, while perception scores ≤5 and >5 were rated as negative and positive respectively. Other contents were use of contraceptives, and factors hindering and promoting utilisation of contraceptive services. Data were analysed using descriptive statistics, Chi-square test and logistic regression at p=0.05.

Age of respondents was 36.6±8.9 years and 83.3% were females. Eighty percent were married and 8.2%, 22.7%, 45.8% and 23.3% had informal, primary, secondary and tertiary education respectively. Sixty-one percent were from monogamous families. Respondents' knowledge score was 10.15±5.06. Respondents who had poor, fair and good knowledge of contraceptives were 31.8%, 38.4% and 29.8% respectively. Perception score of respondents was 8.03±1.94. Respondents with positive and negative perceptions of contraceptive were 6.0% and 94.0% respectively. All respondents had heard about contraceptives and 32.4% received information from health workers. Seventy six percent reported that they had ever used contraceptives of which 227 (57.0%) were current users. Condom (32.1%) was the most commonly used contraceptive. Factors hindering utilisation of contraceptive services were fear of confidentiality (55.9%) and fear of anti-retroviral interaction with contraceptive drugs (27.4%). Factors promoting utilisation of contraceptive services included child spacing (21.6%), prevention of unintended pregnancy (14.8%) and limiting child bearing (11.2%). Respondents' level of education was significantly related to knowledge of contraceptives. Similarly, being female

(83.3%) and monogamous family type (61.1%) were significantly related to current contraceptive use. Respondents' with primary education were more likely to have poor knowledge of contraceptives compared with those that had secondary and tertiary education (OR=3.44; 95% CI: 1.627.29). Male respondents were less likely to utilise contraceptive services compared to their female counterparts (OR = 0.12; 95% CI: 0.04-0.36).

Respondents had poor knowledge of contraception and fear of confidentiality was a major factor hindering utilisation of contraceptive services. It is therefore recommended that public enlightenment and health education strategies are needed to improve knowledge and promote adoption of contraceptive services.

Keywords: Contraceptive use, Unintended pregnancy, Child bearing, People Living With HIV/AIDS

Word count: 440

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HIV	-	Human Immunodeficiency Virus
AIDS	-	Acquired Immune Deficiency Syndrome
UNAIDS	-	United Nations on AIDS
ARV	-	Antiretroviral
WHO	-	World Health Organisation
PMTCT	-	Prevention of mother to child transmission
PLWHA	-	People Living With HIV/AIDS

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the study

Acquired Immune Deficiency Syndrome (AIDS) related illnesses remain one of the leading causes of death globally. According to the World Health Organisation (WHO), there were approximately 35 millioo people worldwide living with HIV/AIDS in 2013. Since 1981 when the first cases were reported, around 78 million [71 million-87 million] people have become infected with the Human Immunodeficiency Virus (HIV) and 39 million [35 million-43 million] people have died of Acquired Immune Deficiency Syndrome(AIDS)-related illnesses (UNAIDS, 2013).

The vast majority of people living with HIV are found in low and middle income countries. According to WHO (2013), sub-Saharan Africa is the most affected region, with 24.7 million people living with HIV as at 2013. Seventy-one percent of all people who are living with HIV in the world live in this region. Of these, 3.2 million are children aged less than 15 years. According to WHO (2013), an estimated 2.1 million individuals worldwide became newly infected with HIV in 2013. This includes over 240,000 children (<15 years). Most of these children live in sub-Saharan Africa and were infected by their HIV-positive mothers during pregnancy, childbirth or breastfeeding. HIV is one of the world's leading infectious diseases. According to WHO, an estimated 39 million people have died since the first cases were reported in 1981 and 1.5 million people died of AIDS-related causes in 2013.

About 67% of people living with HIV are in sub-Saharan Africa, the region worst affected by AIDS (WHO, 2009). These include 90% of the world's children below 15 years living with the virus. The key regional dynamics shows that heterosexual intercourse remains the primary mode of HIV transmission in sub-Saharan Africa with extensive ongoing transmission to newborns and breast-fed babies. Family planning is one aspect of reproductive health where linkages with HIV programmes are especially important. Integrating family planning services into HIV prevention, treatment, and care services provides an opportunity to increase access

to contraception among HIV clients who do not want to become pregnant, or to ensure a safe and healthy pregnancy and birth for those who wish to have a child (WHO, 2009).

In view of the fact that People Living with HIV/AIDS (PLWHA) desire sexual intercourse as well as children, the use of family planning is of utmost importance to them. The World Health Organisation (1995) defined family planning as a way of thinking and living that is adopted voluntarily based on knowledge, attitude, responsible decision making by individuals or couples in order to promote the health and welfare of the family and contribute to the advancement of the community.

Studying family planning utilisation helps to focus on the subset of HIV-infected people who are most likely to have children by choice. They are an important subpopulation whose counselling and service needs differ substantially from other people Family planning utilisation is important to women and men with HIV/AIDS and other sexually transmitted infections who do not want to risk infecting their partners and children (UNAIDS, 2008).

As highlighted by the United Nations, to prevent unintended pregnancies among HIV-positive women, the provision of quality family planning services is important. Family planning services together with preventing primary HIV infection in women have been reported to significantly reduce the proportion of infants infected with HIV by 35-45%. The Prevention of Mother to Child Transmission (PMTCT) starts with preventing the mother from having an unwanted pregnancy. This emphasizes the public health significance of providing effective family planning services (WHO, 2006).

Family planning has been shown to play a pivotal role in population growth, poverty reduction and human development. Moreover, the desire of people living with HIV/AIDS (PLWHA) to have children in the future has implications for the transmission of HIV to sexual partners and newborns. Some studies have shown that a high proportion of people living with HIV/AIDS desire to have a child/children.

In a study carried out in the USA on 1421 HIV-infected men and women, 28-29% of those receiving medical care were found to desire children in the future (Chenet al, 2001). In Cape Town, South Africa, a study found that 57% of males who were living with HIV and on antiretroviral therapy and follow-up care and 45% of women living with HIV desired or were

open to the possibility of having a child (Fertility intentions and reproductive health care needs of people living with HIV in Cape Town, South Africa, 2009).

However, many PLWHA desires to have children but at the same time do not use any family planning methods; common factors hindering the use of family planning include: cost and limited access to quality family planning services among others. Some norms such as early child bearing, preference for large family sizes that is encouraged by the strong desire to sustain lineage and the believe that many children provide old age security remains barriers to contraceptive use (WHO, 2006).When health care programs provide services in ways that meet multiple clients needs, satisfaction with the service delivery increases and the scarce financial and human resources are better utilized (Family Health International, 2008).

1.2 Statement of Problem

Female PLWHA face a dilemma in expressing their sexuality on one hand. They want to have children but at the same time they may be concerned about re-infecting their infants. The problem may be more serious among sero-discordant couples. With the observation of the project writer over a period of two years it is noted that one out of every ten clients will not take up family planning because of their HIV status. Some other studies conducted in the past focused on assessing the knowledge and integration of Family planning methods to the care of PLWHA but none on utilisation, hence the need to conduct this study.

In studies of women with HIV infection, approximately 70% are sexually active, effective contraceptive use is variable, and unplanned pregnancy frequently reported. In a cohort of Irish HIV positive women only 57% of the sexually active women used a reliable method of contraception. A French study of sexually active women showed 20% was using no contraception.

According to reports from the Ministry of Health in Uganda, (2005), over 1.4 million women including PLWHA desire to delay pregnancy, space their children, or stop childbearing for various reasons but do not use any Family Planning method due to cost of family planning services and accessibility. The Uganda HIV/AIDS Sero-behavioural survey (2006) report indicated that consistent condom use among sexually active PLWHA is at only 20%. In The AIDS Support Organisation (TASO), 60% of PLWHA are sexually active and of these, those

reporting modern contraceptive use other than use of condoms are estimated to be less than 20% (TASO, 2006).

The low use of modern Family Planning options other than condoms among PLWHA contributes to a rise in pregnancies that are unintended, new adult and pediatric HIV infections, poor health outcomes and low household incomes. The increasing availability of PMTCT and Anti Retroviral Therapy (ART) services has restored desire for children among PLWHA. However these interventions are not 100% effective in stopping HIV acquisition and transmission Family Health Initiative (FHI, 2008).

In addition, in many countries women are unable to make autonomous decisions about their sexual and reproductive health. Women living with HIV infection may feel unable to disclose their HIV status and negotiate condom use with new sexual partners for fear of abandonment, domestic violence, loss of economic support, and social isolation (Chen et al., 2001)

1.3 Justifications

Data has shown that there is low utilisation of family planning services among PLWHA which increases mother to child transmission. As highlighted by the United Nations, to prevent unintended pregnancies among HIV positive women, provision of quality Family Planning services is important. Family Planning services together with preventing primary HIV infection in women have been reported to significantly reduce the proportion of infants infected with HIV by 35%-45%. Prevention of Mother to Child Transmission (PMTCT) starts with preventing the mother from having an unintended pregnancy. This emphasizes the public health significance of providing effective Family Planning services to PLWHA (WHO, 2006). Ministry of Health has put in place favorable policies that promote utilisation of family planning services among PLWHA yet family planning utilisation is reported as a challenge. There is need to identify the probable cause for this challenge.

Health agencies, program managers and policy makers target to improve contraceptive services and delivery of HIV/AIDS services will require more information on how to bridge the gap between the increasing need for effective family planning services and the current low utilisation of family planning services.

This study is timely for government and non-governmental organisations involved in giving care to PLWHA because it adds to existing knowledge about utilisation of family planning among sexually active PLWHA, at such a time when there is declining stigma of the HIV epidemic and improving quality of life due to improving HIV/AIDS care and treatment services, PMTCT and ARV therapy that in themselves influence reproductive decisions among PLWHA. In addition, it will generate information that will help in formulation of evidence based decisions by program implementers to strengthen the uptake of family planning services.

1.4 Research Questions

1. What is the knowledge of PLWHA on family planning?
2. What is the perception of PLWHA on utilisation of contraceptive services?
3. What proportion of PLWHA use contraceptives?
4. What are the factors promoting utilisation of contraceptive services among PLWHA?
5. What are the factors hindering utilisation of contraceptive services among PLWHA?

1.5 Broad objective

The broad objective of this study is to investigate the utilisation of family planning services among People Living With HIV/Aids (PLWHA) in Presidents Emergency Plan For Aids Relief (PEPFAR) clinic, Adeoyo Maternity Teaching Hospital, Ibadan.

1.6 Specific objectives

The specific objectives were to:

1. Assess the knowledge of PLWHA on family planning methods
2. Assess the perception of PLWHA on utilisation of contraceptive services.
3. Document the proportion of PLWHA utilising e service.
4. Identify the factors promoting the utilisation of contraceptive services among PLWHA.
5. Identify the factors hindering the utilisation of contraceptive among PLWHA

1.7 Hypotheses

1. There is no significant relationship between socio demographic characteristics of respondents and knowledge of contraceptive services
2. There is no significant relationship between socio demographic characteristics and perceptions of contraceptive services.
3. There is no significant relationship between socio demographic characteristics of respondents and utilisation of contraceptive services

CHAPTER TWO

LITERATURE REVIEW

2.1 Brief Overview of HIV/AIDS and PLWHA

The incidence of HIV/AIDS is a problem to sustainable global order, and indeed sub-Saharan Africa's development. It is needless to say millions of people across the world are threatened every minute by a wide range of social problems – poverty, illiteracy, gender bigotry, conflict, drug abuse, addiction and trafficking, human trafficking, sexually transmitted infections (STIs), including Human Immunodeficiency Virus (HIV) and its advanced stage, Acquired Immune Deficiency Syndrome (AIDS). The rate at which these social pathologies are spreading in sub-Saharan Africa is disturbing (Abdul Azeez and Ismail 2010). The WHO (2013) HIV epidemic update indicated that an estimated 35 million people are living with HIV/AIDS worldwide, of which 24.7 million [23.5 million – 26.1 million] are in sub-Saharan Africa. Women account for 58% of the total number of people living with HIV in sub-Saharan Africa (UNAIDS, 2013).

Inui et al. (2009) opined that if adequate measures are not taken, the catastrophic nature of HIV/AIDS will grind down the economic activities of some countries, if not the whole sub-Saharan African social order. This is because the global number of People Living with HIV/AIDS (PLWHA) is increasing rapidly, from the earlier 8 million in 1990 to 35 million in 2013 and sub-Saharan Africa carries a large share of the burden of the disease. The provision of quality HIV care in Africa, including effective contraceptive services, remains a challenge and therefore this region presents peculiar needs for effective delivery of family planning services to PLWHA (WHO, 2007).

The desire for HIV-infected patients to conceive has been a topic of recent research (Sauer and Chang 2002, Chen et al., 2001). Procreation is a basic human instinct. Expectedly, HIV-affected couples also desire to have children (Chen et al., 2001; Bunnell et al., 2005). For instance, a Ugandan (Toroto) study among a cohort of HIV-positive women receiving ART over a two year period showed that although 93-97% of all women reported not wanting any more children at any time, only 14% of women used permanent or semi-permanent family

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planning methods and fewer than 8% used dual contraception by their second year on ART (Homsy et al., 2009).

2.2 Situation of People Living With HIV/AIDS in Nigeria

Based on spectrum estimates for 2013, the number of new infections in the country is 220,394. The total number of new infections in females continued to surpass that of the males (NACA, 2014).

Findings from the results of Garko's study (2007) conducted among PLWHA in Kaduna revealed some common situations being faced by PLWHA with reference to their sexual and family planning needs. These include the fact that the majority of female PLWHA are not well informed about the issue of safe sex and planned pregnancy and their main problem appeared to be their inability to decide when to have sex as this appears to be the exclusive preserve of the men (husband).

The majority of PLWHA are not aware of orthodox family planning methods; few of them know about the male condom, fewer still know about the female condom. Some male PLWHA do not like condoms because they claim it 'removes the pleasure of sex'' Some do not believe in condoms at all. The female condom which is known by few people is not popular among them due to its high cost and unavailability

Very few PLWHA are familiar with other family planning methods such as the pill, the Lippes loop and the injectable contraceptive. Some claim that the natural methods of birth control, such as the rhythm method, coitus interruptus, and the safe period are better. This belief appears to have deep seated cultural and religious attachment.

2.3 Contraceptive Options for People Living with HIV/AIDS

At the Alma-Ata conference (1978), family planning services were highlighted as one of the basic and important strategies for reducing high risk pregnancies that occur either too early, too late, or too frequently and also as a way to improve child health.

Since the 1960s, family planning programmes have helped millions of women worldwide to avoid unintended pregnancies often associated with high risk abortions. Modern methods of family planning include: the pill, IUDs, injectables, implants, male and female condoms but

exclude lactational amenorrhoea, rhythm, and withdrawal. In general, the same contraceptive options are available to couples irrespective of their HIV status. According to WHO's Medical Eligibility Criteria for Contraceptive Use, most contraceptive methods are considered to be safe and effective for HIV-positive women, both with asymptomatic HIV and AIDS (WHO, 2004). Although women living with HIV make up 59% of all adults living with HIV in sub-Saharan Africa, there is still limited evidence of extent or type of contraceptive used by them. For women who are unable to negotiate safer sex, there are contraceptive methods they can initiate such as male and female condoms (UNAIDS, 2006).

2.3.1 Hormonal contraception

World Health Organisation publications (WHO, 2004; 2006) indicate that there are no restrictions on the utilisation of hormonal contraception by HIV-positive women, whether pills, injectables, implants. Women on antiretroviral treatment can use them as well. However, the drug, rifampicine, which is used for tuberculosis treatment, may decrease the effectiveness of oral contraceptives (WHO, 2004; 2006), and the limited data available suggest that several antiretroviral drugs may either increase or decrease the bioavailability of steroid hormones in hormonal contraceptives. Therefore, the consistent use of condoms is recommended, not only for preventing HIV transmission, but also for preventing unintended pregnancies. Low-dose oestrogen (V35 Ag) is not recommended for women receiving rifampicine (WHO, 2006). Data on hormonal contraceptives and progression of HIV disease, while much needed, are still limited. Regarding transmission of other STIs, WHO recommends no restrictions on the use of combined oral contraceptives, progestogen-only pills, combined injectables or DMPA injections among women at high risk of STIs. However, the guidelines emphasize that none of these methods provide protection against STIs.

2.3.2 Intrauterine device (IUD)

IUDs can be used in case of HIV infection, except for women with AIDS and those not on antiretroviral therapy (WHO, 2004; 2006). Limited evidence shows that IUD use by HIV-infected women has not been associated with increased risk of infection-related complications nor with HIV cervical shedding (WHO, 2006). The fact that copper-bearing IUDs may

increase menstrual bleeding, and subsequently the risk of anaemia, has to be taken into account in case of HIV-positive women.

2.3.3 Female and male sterilisation

Female sterilisation is the most commonly used family planning method in developed countries, whereas in developing countries reversible methods are more popular (United Nations Department of Economics and Social Affairs, Population Division, 2003). Some studies have shown that HIV-positive status influences fertility intentions (Paiva et al., 2003) especially the desire to stop childbearing among those who have completed their families, who therefore may favour the choice of a permanent method (Hopkins, 2005). Male sterilization (vasectomy) is also an option but its use among HIV-positive men has not been documented.

2.3.4 Emergency contraception

Emergency contraception can help to prevent unintended pregnancies. Immediate access is crucial for method effectiveness. For women living with HIV who suffer sexual violence, access to emergency contraception may be vital (Karanja, 2003). Concerns have been raised that some women could use emergency contraception in place of regular contraception. However, while access to information improves knowledge of this method, it does not increase its use (Graham, et al., 2002).

In general, women living with HIV and discordant couples still seem to have far too little knowledge of emergency contraception. For example, in South Africa, where contraceptive use is quite high compared to many other African countries, qualitative studies conducted among HIV and PMTCT clinic attendees showed that women and men living with HIV had little knowledge of emergency contraception or how to access it (Cooper et al., 2006). As with other non-barrier contraception, emergency contraception does not protect against STI or HIV transmission and information on risk reduction needs to be routinely given.

2.3.5 Barrier methods: Male and female

Male Condom

According to Park (2007), the condom is the most widely known and used barrier device by males around the world. In India, it is better known by its trade name "NIRODH", a Sanskrit word, meaning "prevention". The condom is receiving new attention today as an effective simple "spacing" method of contraception, without side effects. It prevents the semen from being deposited in the vagina, thus preventing pregnancy and transmission of sexually transmitted infections.

Female Condom

Park (2007) stated that the female condom is a pouch made of polyurethane, which lines the vagina. An internal ring in the close end of the pouch, covers the cervix and an external ring remains outside the vagina. It is pre-lubricated with silicon and spermicide need not be used. It is an effective barrier to sexually transmitted infection.

Current data suggest that both male and female condoms are highly effective in protecting against pregnancy (failure rates for typical use are 15% versus 21% and for perfect use 2% versus 5%, respectively) (Hatcher et al., 2004). A recent study comparing the female and the male condoms for their effectiveness in preventing pregnancy showed that the two methods are substantially the same (Hatzell Hoke and Depperthes, 2005). Male condoms, used consistently and correctly, are the most effective means to prevent sexual transmission of HIV (Weller and Davis 2002).

Data from people accessing services for antiretroviral treatment and PMTCT in Ghana, Ethiopia, Kenya, Rwanda and South Africa show that male condoms are the contraceptive method most frequently used by people living with HIV (Degu et al., 2006; Rutenberg and Hack 2004). This differs somewhat from data on contraceptive method mix in general populations. Interventions to promote condom use in sub-Saharan Africa and Asia have generally led to increased condom use, mostly in commercial and casual sex, while levels of condom use are lower as the degree of intimacy and stability of the relationship are greater. However, condoms have rarely been promoted to stable couples either. Using condoms demands communication and negotiation (Esnatt, 2013).

Recent studies provide a more encouraging picture in terms of women's ability to influence men's sense of sexual risk and condom use. One study has shown that married women play an important role in condom use, which depended on the woman's subjective sense of HIV risk (but not the man's) (Pullum and Shah 2005).

To date, few studies have looked at men's actual responses to female condom use (Williamson et al., 2006). Qualitative data have shown that women living with HIV in particular feel more in control when using the female condom compared to the male condom or unprotected sex. Women view the female condom as a means of enhancing their safer sex bargaining power within the relationship (Hoffman et al., 2004). Efforts to target men and to empower women need to go hand in hand if persistent obstacles to condom use are to be overcome.

2.4 Fertility Desire and Family Planning among PLWHA

Globally, fertility is one of the principal components of population dynamics which significantly makes the developing countries host a large proportion of younger population (Central Statistical Authority, 2005).

The vast majority of people around the world adopted voluntary family planning programmes during 1974-94, a period termed the "reproductive revolution". The period saw the appearance of a new fertility determinant organized actions by whole societies to bring birth rates down to match the falling death rates, and to improve the socio economic situation of the community. Those actions give women greater control over their own child bearing, and to relieve families from the unexpected burdens of raising more surviving children than in the past. The major cause of this launching of reproductive revolution was the primary health care system. During this period, a reproductive change occurred in every region of the world except sub-Saharan Africa (World Bank, 2010).

The average total fertility rate in Africa is 4.9 children per woman while that of sub-Saharan Africa is 5.4. In sub-Saharan Africa, the highest total fertility rate is in Uganda with 6.7 children per woman and the smallest is in South Africa with 2.9 children per woman (Central Statistical Authority, 2005).

In Ethiopia, as in many cultures across the world, child bearing is considered the customary right and duty of women for which most of the time sustainability of marriage and economic possession are guaranteed. Fertility and having children are regarded as natural and failure in either is universally considered socio-culturally abnormal. The root of infertility is perceived to lie within the woman resulting in loss of respect; the husband is rarely implicated in the blame (Misganaw, 2001; Federal Democratic Republic of Ethiopia Ministry of Health 2006). Total fertility rate in Ethiopia declined between 1990 and 2005 from 6.4 to 5.4 children per woman while family planning utilisation is low with a met need for family planning of 15% and unmet need of 34% for currently married women (Central Statistical Authority, 2005).

2.5 Fertility and HIV Infection among PLWHA

One effect of HIV/AIDS on women and society at large is a change in fertility levels, which is influenced in part through altered behaviour that has been largely influenced by AIDS education. Increased condom use, delayed onset of sexual relations, older age at first union, and fewer premarital sexual relations; and lower rates of remarriage after an AIDS-related death of a partner have driven down fertility rates (Shari Margoles, 2004).

The other effect of HIV/AIDS on fertility rates in HIV-positive women and men is through biological mechanisms compared to non-infected people. HIV-infected women experience reduced pregnancy rates and higher rates of both planned abortion and miscarriage. HIV/AIDS may induce sterility, increase foetal mortality, decrease production of spermatozoa, and sometimes decrease frequency of sexual intercourse, all contributing to declining fertility (Shari Margoles, 2004).

2.6 Fertility Intention among HIV-positive Men and Women

HIV-positive men and women may have fertility desires and may intend to have children. The extent of these desires and intentions and how they may vary based on individuals' social and demographic characteristics and health factors is not well understood. The fact that many HIV-infected adults desire and expect to have children has important implications for the prevention of vertical and heterosexual transmission of HIV (Chen et al., 2001).

It was found that 28-29% of HIV-infected men and women receiving medical care desire children in the future. Among those desiring children, 69% of women and 59% of men actually expect to have one or more children in the future. In a study of HIV positive heterosexuals in Switzerland, 20% of HIV-positive women and 22% of HIV-positive men reported a current desire for children during the study period. A larger proportion (47.5%) of HIV-positive women and 38% of HIV-positive men stated they would like to have children in their future life (Laura et al., 2003). In Ethiopia, a study revealed that 40.02% of HIV-positive individuals, of which 44.7% were women and 35.2% were men within the reproductive age, desire children while 53.5% are using and 39.7% want to use family planning in the future (Sauer and Chang 2002).

2.7 Family Planning Utilisation among PLWHA

Contraceptive use and compliance are related to the range of methods available, patient choice, prevalent health and religious beliefs, perceptions of methods effectiveness, and side effects such as women who may have less tolerance for heavy and prolonged vaginal bleeding than amenorrhea. Correct use of most user dependent methods like both male and female condoms and pills requires a basic knowledge of reproduction and literacy skills to follow written institutions (Joint United Nations Programme on HIV/AIDS, 2008).

Family planning utilisation is important to women and men with HIV/AIDS and other sexually transmitted infections who do not want to risk infecting their partners and children (UNAIDS, 2008). In studies of women with HIV infection, approximately 70% were sexually active, effective contraception use was variable, and unplanned pregnancy frequently reported. In a cohort of Irish HIV-positive women only 57% of the sexually active women used a reliable method of contraception. A French study of sexually-active women showed that 20% were not using any contraception. In an African study, 39% of women with HIV infection used contraceptives (Joint United Nations Programme on HIV/AIDS, 2008)

In many countries women are unable to make autonomous decisions about their sexual and reproductive health. Women living with HIV infection may feel unable to disclose their HIV status and negotiate condom use with new sexual partners for fear of abandonment, domestic violence, loss of economic support, and social isolation (Chen et al., 2001). In a qualitative

study in India, in-depth interviews were held with a group of 43 selected currently married women living with HIV/AIDS (WLHA) aged 18-35 years. The study highlighted the women's need to fulfil their fertility desires and recommended programmes that both enable WLHA to exercise informed choice and sensitize healthcare providers about these needs.

In Rwanda, although a majority of HIV-positive women reported discussing family planning with a health worker during their last pregnancy (79%), modern family planning use remained low (43%). Condoms were the most commonly used method (31%). Further efforts are needed to improve uptake of modern methods, including dual protection in PMTCT settings (Shari Margolis, 2004, Fourth meeting of the Follow-up committee 2002).

2.8 Factors Influencing Utilisation of Family Planning Services

Some of the respondents in this study reported that one of the factors that hinder their use of FP is the fear of anti-retroviral drug reaction with FP drugs. This finding is consistent with that of Berhane et al. (2013) which revealed that 26.3% of HIV-positive women did not use FP because of fear of drug reaction.

One-third of the PLWHA in this study reported that the usefulness of FP for child spacing and to stop child bearing altogether promotes its utilisation. Not desiring to have children may strongly influence the use of contraception by increasing its uptake.

2.8.1 Age and family planning utilisation among PLWHA

Rob et al. (2007), in their study on contextual influences on modern contraceptive use among women irrespective of their HIV status, in six countries in sub-Saharan Africa that included Kenya, Malawi, Tanzania, Ivory Coast, Burkina Faso, and Ghana, showed that younger women, especially in the age group 20-29 years, were more likely to use modern contraceptives. For example, findings in Tanzania showed that the likelihood of contraceptive use in the age group 20–29 years was higher [OR=1.88; 95% CI 1.35-2.62] compared to age group 15–19 years [OR=1.47; 95% CI 0.85-2.55] and age group 40–49 years [OR=0.61; 95% CI 0.41-0.90].

Utomo et al. (1983), in their study a cohort of women, irrespective of their HIV status, following analysis found that older age was one of the four major independent factors associated with the use and non-use of contraception.

2.8.2 Parity and family planning use

A study of demographic and socio-cultural factors influencing contraceptive use among currently married women in Uganda, irrespective of their HIV status, showed that higher contraceptive use was associated with a higher number of surviving children. Agyei and Migadde (1995 found that 26.2% of women with three or more surviving children used contraceptives compared with 19.0% among women with no surviving children.

Todd et al. (2008), in their study of factors associated with contraceptive use among hospitalized obstetric patients, irrespective of their HIV status, reported that contraceptive use was independently associated with having a greater number of living children (AOR=1.30, 95% CI: 1.20 – 1.41).

2.8.3 HIV serohositivity, care and family planning use

Feldman and Maposhere (2003), in a study to explore the impact of HIV/AIDS on sexual and reproductive lives of women living with HIV in Zimbabwe, found that contraceptive and condom use increased markedly after HIV diagnosis, especially among those attending support groups.

In a Cameroon study, results showed that fertility rates were lower in HIV-positive women compared to their HIV-negative counterparts. The overall fertility rate for HIV-positive women was 118.7 births per 1000 woman-years [95% CI 98.4 to 142.0] compared to 171.3 births per 1000 woman-years [95% CI 164.5 to 178.2] for HIV-negative women. The ratio of the fertility rate in HIV-positive women to the fertility rate of HIV-negative women was 0.69 [95% CI 0.62 to 0.75] (Eugene and Wiysonge 2008).

Gray et al (1998), in a study to assess the effects of HIV-1 on pregnancy showed that pregnancy prevalence is greatly reduced in HIV-1-infected women, owing to lower rates of conception. The odds of pregnancy were low both in HIV-1-infected women without symptoms (0.49 [0.39-0.62]) and in women with symptoms of HIV-1-associated disease (0.23 [0.11-0.48]). The incidence rate of recognized pregnancy during the prospective follow-up study was lower in HIV-1-positive than in HIV-1-negative women (23.5 vs 30.1 per 100 woman-years, adjusted risk ratio 0.73 [0.57-0.93]).

2.8.4 Education level and family planning use

A study on fertility and FP trends among women in urban Karachi-Pakistan, irrespective of their HIV status, showed a strong trend toward declining fertility and increased utilisation of contraceptives among the relatively well-educated, middle-class population (Hagen et al., 1999).

In another study on factors affecting use and non-use of contraception among women, irrespective of their HIV status, current users of contraceptives or their spouses were more educated than their counterparts who were not current users. (Utomo et al., 1983).

Rob et al. (2007), in their study of women, irrespective of their HIV status, in six sub-Saharan African countries including Kenya, Malawi, Tanzania, Ivory Coast, Burkina Faso, and Ghana, showed that secondary or higher educational attainment was more likely to be associated with the use of modern contraceptives in all the six countries. For example in Burkina Faso, higher educational attainment was more likely to be associated with use of modern contraceptives [OR=2.52: 95% CI 1.71-3.72], compared to lower educational attainment [OR=1.52: 95% CI 1.05-2.21].

2.8.5 Knowledge about family planning methods

A study about knowledge as an important predictor of contraceptive use among young people irrespective of their HIV status showed that condom knowledge at logistic regression was associated with 33% increased odds of ever using them (OR = 1.33) among both male and female participants (Ryan et al., 2007).

Women enrolled in preventive HIV vaccine trials reported insufficient knowledge of certain contraceptive methods to be among the reasons for not using contraception and that misconceptions related to FP methods and incorrect use may have led to inconsistent use resulting in undesired pregnancies (Kibuuka et al., 2009).

Another survey conducted in 11 countries among 7000 women aged 14-40 years, irrespective of their HIV status, showed that knowledge gap about FP methods restricts women's contraceptive choices and hence use. Women fail to take advantage of new contraceptive methods due to lack of knowledge and rather stay with familiar options (Rossella, 2006).

2.8.6 Spouse and effect on family planning use

A study on correlates of consistent condom use among HIV-positive African American women living in the United States showed that women with HIV were more likely to use condoms if they had high partner communication self-efficacy [OR = 7.77, 95% CI 3.3-18.6, p = 0.001] and reported low partner-related barriers to condom use [OR = 4.68, 95% CI 1.8-12.2, p = 0.001] (Raiford et al., 2007).

In another study on contextual influences on modern contraceptive use among women in six sub-Saharan African countries, irrespective of their HIV status, Rob et al. (2007) showed that partner approval was more likely to be associated with use of modern contraceptives. For example, partner approval was 4 times more likely to be associated with modern contraceptive use in Malawi [OR =3.59; 95% CI 2.93-4.39] and in Kenya [OR =3.49; 95% CI 2.73-4.46].

Partner opposition was found to cause a statistically significant increase in unmet need accounting for as much as 20 percent of the unmet need reported by women and a shift in contraceptive use favouring traditional methods over modern methods (Wolff et al., 2000).

2.8.7 Influence of culture on family planning use

Individual factors that determine a person's use of services such as FP are mediated by the characteristics of the community in which the individual lives. It is important to look beyond individual factors when examining FP use or non-use (Tsui and Stephenson 2002). Cultural norms and expectations are varied and include among others, fatalism attributed to HIV-disease, fear of infecting the unborn child, gender roles designated by society such as the role of women in child bearing and the demand for bigger families (Srikanthan and Reid 2008).

A qualitative study to identify and describe perceptions of HIV-positive Swazi women on childbearing showed that cultural expectations override individual factors such as knowledge about one's HIV sero-positivity. For example pressure from in-laws forces HIV-positive women to have children despite their status as well as the desire to portray "femininity" and fulfill womanhood (Sukati and Shabangu 2006).

Often the perceptions of individuals are shaped by their culture on matters of fertility, including contraceptive use. In a cross-sectional survey to assess use and identify condom use barriers, results showed that 36.8% of males and 47.5% of females used condoms during the last occasional intercourse. Failure to use condom was related to its perceived lack of efficacy [OR = 9.76 (3.71–30.0)] and perceived quality [OR = 3.61 (1.31–9.91)] (Sennen et al., 2005). A study to explore religious beliefs among men and their influence on use of condoms showed that most of the men (63%) avoided using condoms and were opposed to women's contraceptive use (Degni et al., 2008).

2.8.8 Health service delivery and family planning use

Health services, in particular private family planning service delivery, play a big role in sexual and reproductive health behaviours, outcomes of risk perception, and in this regard, use of family planning by PLWHA. In one study, results showed that the proximity of a private health facility in urban areas, which likely reflects increased availability of family planning methods, was positively associated with current use (odds ratio, 2.1) as was the presence of a higher number of trained family planning service providers (odds ratio 1.7) (Kalende et al., 2003).

In a study on contraceptive use and incidence of pregnancy in Ivory Coast among 546 HIV-positive women followed up for 2 years after delivery and given family planning counselling and free contraceptives, results showed high proportions of women using modern contraception, varying from 52 to 65%, and low pregnancy incidence (calculated as the number of pregnancies for 100 women-years at risk) of 5.70 (95% CI: 4.17-7.23). Findings in this study indicated that family planning counselling and regular follow-up after delivery was accompanied by a high rate of contraceptive use and low pregnancy incidence among PLWHA (Brou et al., 2009).

In Rakai, Uganda, a community randomized trial of enhanced FP efforts in an HIV surveillance programme showed statistically significant higher use of hormonal contraceptives (23.2% vs. 19.9%) [p=0.009] and lower pregnancy rates (12.4% vs. 15.7%) [p=0.002] in the intervention arm as compared to the control arm. Investigators found that

using trained volunteers and social marketing of contraceptives can improve contraceptive uptake among PLWHA (Tom et al., 2006).

In a study carried out among people living with HIV/AIDS attending a clinic at State Specialist Hospital, Akure, South West Nigeria, factors found to determine the current use of the barrier method of family planning included having living children, good knowledge of family planning methods, high level of education, urban area of residence and lack of death of any child. Poor knowledge and very low current use of contraception among people living with HIV/AIDS were also reported in the study. Although, contraceptive use and compliance is related to the range of methods available, patient choice, prevalent health and religious beliefs, perceptions of method effectiveness, and side effects, correct use of contraceptive methods requires a basic knowledge of contraception and literacy skills to follow written instructions (Kayode, Patrick, Victor, Stephen and Debora, 2014).

2.9 Legal and policy implications

Human rights are the foundation of sexual and reproductive rights. Non-discrimination and equality are of particular importance when dealing with women and men living with HIV. Access to family planning services and the range of contraceptive options must be ensured for women and men living with HIV. Particularly in countries with low contraceptive prevalence rates, this is currently not the case. A study on reproductive rights for women affected by HIV carried out in Argentina, Mexico, Poland, Kenya, Lesotho, South Africa and Swaziland showed that contraceptive options tend to be limited. Health care providers' preferences determined how much and what kind of information women received about contraceptives (Ipas, 2005). The quality of family planning services is a crucial element for women and men living with HIV. Counseling has to be well conducted to ensure confidentiality and provide age-appropriate and accurate information (International Planned Parenthood Federation, 2005).

While sterilization may be a good option for HIV-positive women and men, depending on age as well as personal and social circumstances, the danger of being pressured or coerced into being sterilized must not be underestimated; hence informed choice must be assured. In some

countries, post-partum sterilisation is prohibited by law, except in cases where either future childbearing or another operation would constitute a high risk. In that context, stark differences in medical practice may greatly affect the extent of post-partum sterilization, as shown in a study in two cities in Brazil, despite the same legal environment (Hopkins et al., 2005). Adequate law and policy to guide decisions and implementation of programmes and services with respect to sterilization are therefore important in order to avoid practices that violate rights. There are still barriers to access to emergency contraception and over-the-counter sale without prescription exists only in about 40 countries, including Jamaica, Argentina, Israel, Australia, New Zealand, China, South Africa and other parts of Africa and Europe, and three of the provinces of Canada (Clements and Daley, 2006).

In some cases, there is even active opposition to making it more widely available (for instance, in Argentina and Poland), while in other places, bureaucratic and financial factors impede increased availability (Ipas, 2005). Numerous studies have demonstrated that providers lack knowledge and have misconceptions about emergency contraception. Even providers who know about the method often do not offer it to women who would benefit from it (Family Health International, 2001).

The current supply of both male and female condoms is highly inadequate (Foss et al., 2003). In particular, the supply of female condoms, though they have been on the market for more than ten years and despite the clear need for women-initiated methods, is significantly below levels that would have an impact on the HIV epidemic (UNITAID/PATH, 2006). Large-scale production, distribution and promotion programmes, including cost reduction, are greatly needed.

With respect to dual protection, many international organisations in the field of sexual and reproductive health have issued policy statements supporting its use (World Health Organisation, 2000). From a public health perspective, the practice of dual protection is essential to the attainment of sexual and reproductive health. However, policies that have focused on condom use have largely ignored contraceptive issues and vice versa. Most policies have been targeting men by promoting condom use with casual partners believed to

be at higher HIV/STI risk, and not with regular partners. How to make dual protection socially and culturally acceptable in long-term relationships has been treated as an untouchable agenda to date (Berer, 1997). Since they are not considered the most effective means of fertility control, the family planning field has been reluctant to recommend condoms alone for dual protection. A shift in mindset among family planning managers and service providers is necessary in order to give more room to the promotion and use of condoms. Access to emergency contraception and abortion, when legal, are also crucial when policies fail to promote and provide contraception and as a back-up in case of contraceptive failure. If dual protection is promoted, all means of increasing safer sex must be taken into account and included in public health campaigns.

Conceptual Framework

This framework will be guided by the Health Belief Model.

2.10.1 Health belief model

The health belief model is a widely applied behavioural model in several disciplines including public health. The model can be use to explain individual's health-seeking behaviour. In this model action is guided by the following six factors:

Believe they are susceptible to outcome risks such as unwanted pregnancies, mother to child transmission and opportunistic infections and reinfections (Percieved Susceptibility).

1. Believe that non-utilization of family planning has serious consequencies (Percieved Severity).
2. Believe that taking actioo- utilisation of family planning by PLWHA would reduce their susceptibility to unintended pregnancies, opportunistic infections and reinfections (Percieved benefits).
3. Believe cost of taking action (Percieved barriers) such as stigmatization, distance and transport difficulties, reluctance to reveal HIV status are outweighed by the benefits of utilisation of family planning services.
4. Believe that PLWHA are exposed to factors that prompt action such as experience of co-patients, family planning counseling from health care providers and current symptoms (Cue to action).
5. Believe that PLWHA are confident in their ability to successfully utilise family planning services.

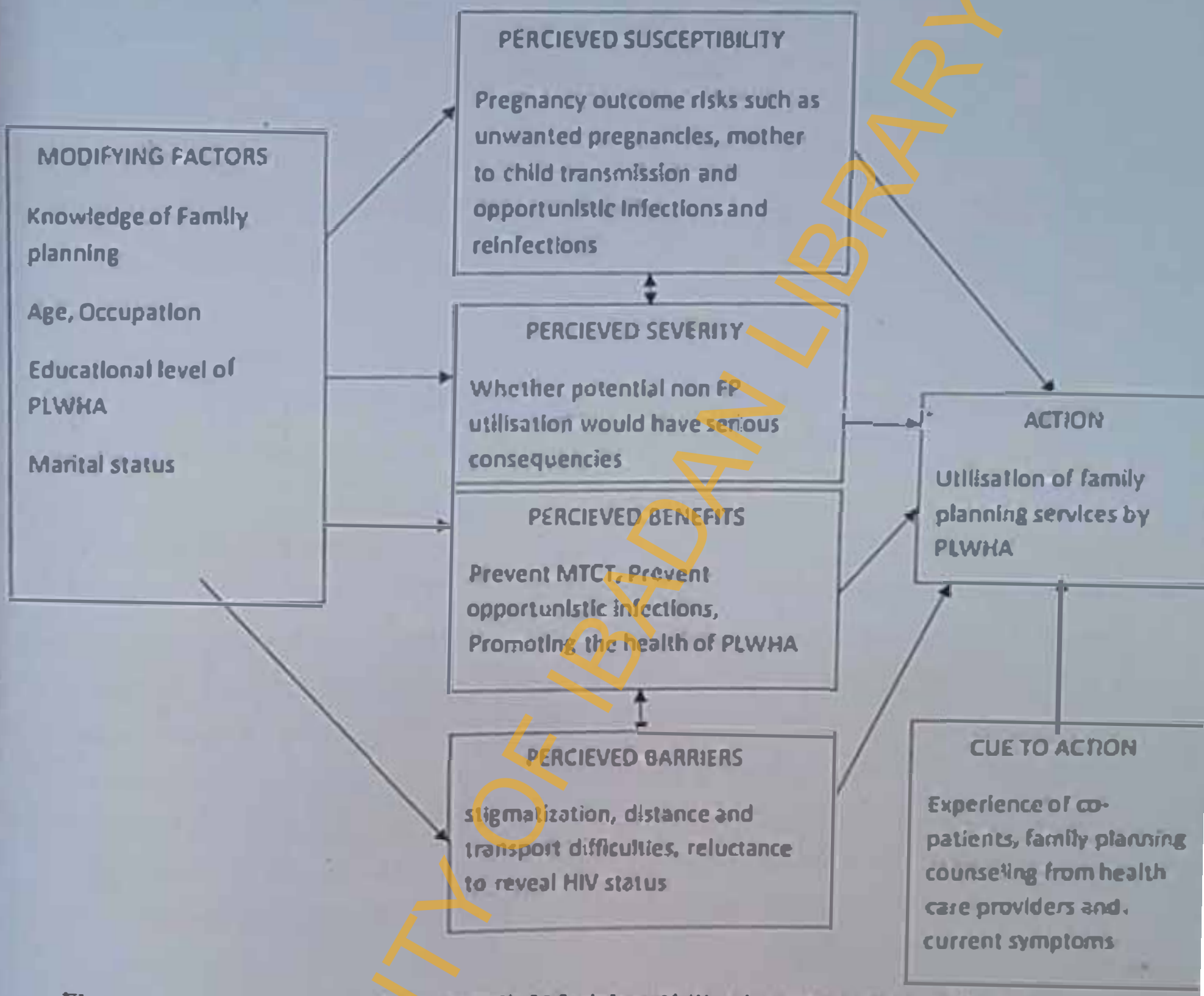


Figure 2.2: Application of Health Belief Model on Utilisation of contraceptive use among PLWHA

Source: Modified from Sheeran and Abraham, 1995

CHAPTER THREE

METHODOLOGY

3.1 Study Design

The study was a descriptive cross sectional survey among PLWHA attending PEPFAR clinic Adeoyo Maternity Teaching Hospital.

3.2 Scope of Study

The scope of this study was confined to the utilisation of family planning services among PLWHA clients attending the PEPFAR clinic of Adeoyo Maternity Hospital.

3.3 Description of Study Area

This study was conducted in Adeoyo Maternity Teaching Hospital, Yemetu, in Ibadan North Local Government Area of Oyo State. The hospital was established in 1928 with total staff strength of about 600 as at the time and presently total staff strength is 512.It started as a General Hospital, served as a health centre for treatment of senior civil servant and the community. It also served as a hospital for training Medical students at the inception of College of Medicine, University of Ibadan in 1948. In 1987, a General Surgery Department, ENT, Ophthalmology and Department of Medicine were relocated to the Ring Road State Hospital leaving behind the Obstetric and Gynaecology, Paediatrics and Accident and Emergency Departments. The administration of Olunba Christopher Adebayo Alao Akala carried out major renovation of the Hospital in 2008 after eighty years of existence in other to improve the health care delivery.

President Emergency Prophylactic Fund for Aids Relieve (PEPFAR) clinic is one of the clinics in Adeoyo Maternity Teaching Hospital. It started originally as a satellite of University College Hospital from May 2008 in Harvard PEPFAR program. Adeoyo became a full fledged site of Harvard PEPFAR/APIN Plus in March 2007.Patient enrolment commenced in

January 2008. Full commencement of ART and PMTCT was in January 2008. There are 10 full time members of staff and about 30 part time staffs.

It is an outpatient clinic that operates everyday while most of their patients are pregnant women and children. According to the clinic records (May 2013) total number of female attending the clinic is 648 women, 259 males and 274 nursing mothers. There are 272 children under two years of age attending the clinic. Service offered in the clinic includes Voluntary Counseling and Testing (VCT), prevention of mother to child transmission (PMTCT) of HIV, Aduh ART, Paediatric ART, basic care and support including orphans and vulnerable children (OVC) once a week with about 100 people in attendance.

3.4 Study Population

All newly registered male and female PLWHA attending PEPFAR clinic, Adeoyo Maternity Teaching Hospital, during the period of study were randomly selected, May, 2013.

3.5 Sample Size Determination

The sample size will be calculated using the following formula

$$n = \frac{Z^2 Pq}{d^2}$$ (Muhofah 2010)

n = minimum sample size

z = 1.96

P = 39% i.e. the prevalence of utilisation of contraceptives among PLWHA in Africa (Mitchell and Stephens 2004).

q = 1.0 – P

= 1 – 0.39

= 0.61

d = Degree of accuracy desired (0.05)

$$n = \frac{1.96^2 \times 0.39 \times 0.61}{0.05^2}$$

$$n = \frac{3.8416 \times 0.39 \times 0.61}{0.0025}$$

$$n = 365$$

3.6 Sampling technique

The number of respondents for the study was 365 at the PEPFAR clinic of Adeoyo maternity teaching hospital. Random sampling of respondents was employed by using the register for new clients –choosing one out of five patients to whom questionnaires were administered as at the time data was collected (May 2013), were recruited for the study.

3.7 Instrument of Data collection

The questionnaire was structured into six sections which were:

Section 1: Socio-demographic characteristics of respondents

Section 2: Family planning knowledge among PLWHA

Section 3: Perception of PLWHA on utilisation of available family planning services.

Section 4: Proportion of PLWHA utilising family planning contraceptives.

Section 5: The factors promoting the utilisation of contraception among PLWHA.

Section 6: The factors hindering the utilisation of contraceptives among PLWHA.

Three research assistants were recruited and trained for the administration of the questionnaire. Data was collected using interviewer administered semi structured questionnaire that was also translated to Yoruba for respondents that do not understand English. The Yoruba form of the questionnaire was then translated back to English to ensure consistency of meaning.

3.8 Validity

In order to ensure validity of the study instruments, relevant literatures were reviewed with a view to learn and know about variables which needs to be measured before developing the questionnaire for the main study. The questionnaire also had undergone scrutiny from my supervisor and experts in the field of health promotion and education, bio-statistics, clinical and community medicine and psychologists.

3.9 Reliability

To ensure reliability of the questionnaire, the instrument was pretested among 40 respondents at the PEPFAR clinic University College Hospital (UCH), Ibadan. The clinic has similar characteristics as that of Adeoyo Maternity Teaching Hospital, Ibadan and reliability of the instrument was 0.72 obtained using Cronbach Alpha.

Cronbach Alpha is a model of internal consistency, based on the average inter-item correlation.

According to this approach, a result showing correlation co-efficient of 0.05 and above closer to 1 is said to be more reliable (Solademi 2011).

Training of research assistant. Three research assistants were recruited and trained for the administration of the questionnaire. This was aimed at upgrading the knowledge relating to the nature of the study and the content of the instrument

3.10 Method of Data collection

Quantitative instrument used was a semi structured interviewered administered questionnaire. The instrument was designed after reviewing related literatures on utilisation of contraceptives services among PLWHA at the PEPFAR clinic of Adeoyo Maternity Teaching Hospital, Ibadan. The design of the instrument was facilitated by the use of HEALTH BELIEF model 9modified from Sheeran and Abraham 1995).Data was collected using three research assistants who distributed the questionnaire to the respondents who attended the clinic during the period of collecting data in May 2013(period of four weeks) from Monday to Friday.The researcher inspects and collates data everyday to ensure the work is done thoroughly.

3.11 Data Management and Analysis

Serial numbers were written on the questionnaire before administering them to identify easily and to facilitate recall, after collection from the field they were sorted, cleaned, collated and coded. A coding guide was developed before data were entered into the computer. The sections of the questionnaire were analysed in the following ways:

Section1, which was the socio-demographic characteristics of respondents', was analyzed using descriptive statistics. Sections 2, 3 and 4 were analyzed using descriptive statistics, Chi-square and logistic regression inferential statistic. Knowledge questions with a maximum of 18-point scales were categorised as poor, fair and good for scores ≤6, >6-12 and >12 respectively, while perception questions with a maximum of 10-point scale were rated as negative and positive for scores ≤5 and >5 respectively. Section 5 was analyzed using descriptive statistics. Data were analyzed using SPSS version 16.0 with a p-value set at 0.05.

3.11 Ethical Considerations

Ethical approval for this was obtained from Ethical Review Committee (ERC) Oyo State Ministry of Health (see appendix III). In addition, informed consent was obtained from the participants after detailed information about the study was provided. They were also informed they could withdraw from the study at any given point when they felt like. Identifier such as name or address was not required of respondents and all information was kept confidential. Completed questionnaires were kept secured to prevent unauthorized access to these

3.12 Limitation

The limitation of the study on the accuracy of the information given by respondents.

Efforts were made to ensure that questions were simple, clear and devoid of technical terms that the respondents will not be able to understand.

Basic ethical guidelines including confidentiality and volunteerism was stressed with the view of encouraging respondents to be as honest as possible.

CHAPTER FOUR

RESULTS

4.1 Socio-demographic characteristics of respondents

Less than half 47.9% of respondents were in the age range 28-37 years, with a mean age of 36.6 ± 8.9 years. Most (83.3%) of the respondents were females and 80.0% were married. Respondents who attained tertiary education had the highest in number (23.3%). Most of the respondents were Yoruba (91.2%), followed by Hausa (5.2%). More than half (61.1%) of the respondents were in a monogamous family and 77.5% were self employed (Table 4.1).

Table 4.1 Socio-demographic characteristics of respondents

Variables	No	(%)
Age group (years)		
18 – 27	46	12.6
28 – 37	175	48.0
38 – 47	99	27.1
48 – 57	33	9.0
≥58	12	3.3
Mean = 36.6		
SD = 8.9		
Marital status		
Single	28	7.7
Married	292	80.0
Divorced/Separated	25	6.8
Type of Family		
Monogamous	223	61.0
Polygamous	113	31.0
Single parenting	17	4.7
Divorcee/separated	12	3.3
Educational Qualification		
Non formal	30	8.2
Primary education	83	22.7
Secondary education	167	45.8
Tertiary education	85	23.3
Religion		
Christianity	200	54.8
Islam	163	44.7
Traditional	2	0.5
Ethnicity		
Yoruba	333	91.2
Hausa	19	5.2
Igbo	13	3.6
Occupation		
Civil servant	52	14.2
Self employed	283	77.5
Full Housewife	9	2.5
Unemployment	21	5.8

Figure 4.1: Age group distribution of respondents (in years)

4.2 Family planning awareness, usage and accessibility among respondents

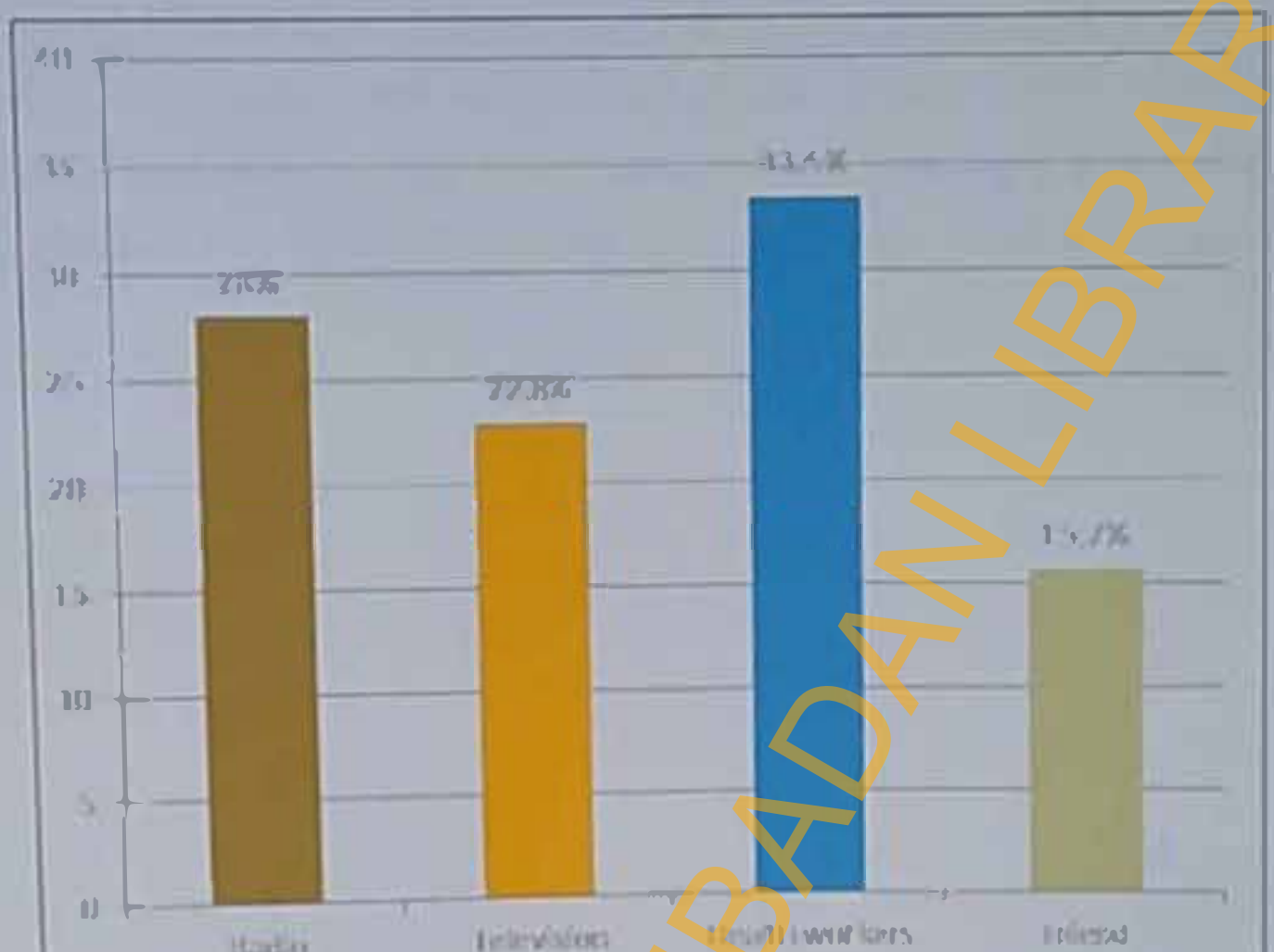
As shown in Table 4.2, all the respondents had heard about family planning. The majority of respondents (75.9%) had used family planning with 33.4% and 32.1% reporting having ever used and currently using condoms respectively. Most of the respondents reported that family planning is accessible for them in the clinic with 43.3% reporting condom dispensation as the most common method available, followed by injectables (19.9%). A high proportion (33.4%) of the respondents heard about family planning from the health workers followed by radio (28.0%); see figure 4.2.

Table 4.2: Family planning awareness, usage and accessibility among respondent. s

(n=365)

Variables	No	(%)
Ever heard of family planning		
Yes	365	100.0
Ever used any family planning method		
Yes	277	75.9
No	88	24.1
Family planning method used (n=277)		
IUD	37	10.1
Oral contr acceptivespills	47	12. 9
Condoms(Male)	122	33. 4
In je ct abl es	48	13. 2
Natural method	5	1.4
Implant	2	0.5
Family planning method presently using		
IUCD	26	7.1
Oral contraceptivesPills	27	7.4
Barrier method: Condoms(Male and Female)	117	32.1
Injectables	31	8.5
Natural Methods	5	1.4
Implants	2	0.5
Types of methods available in the clinic? **		
Dispensing of condom (male and female)	30 1	43.3
Pills	117	16.8
Injectable	138	19.9
IUCD insertions	85	12.2
Implant	54	7.8

** Multiple responses



** Multiple responses

Figure 4.3: Sources of information on Family planning

4.3 Knowledge of family planning among respondents

Table 4.3.1 shows the responses on knowledge of respondents on family planning methods. A high proportion (79.2%) of respondents knew that contraceptives are drugs or objects used to prevent or delay pregnancy, and that male and female condoms cannot be used at the same time (79.2%). Only a few (7.4%) respondents knew of vasectomy as a method of family planning (Table 4.3.2). Hence, 29.9% had good knowledge about family planning (Table 4.3.3).

Table 4.3.1 Knowledge of family planning among respondents

Variables	Respondents with the correct answers (n=365)	Percentage (%)
*Methods of Family Planning		
IUD	216	59.2
Oral Pills	217	59.5
Condoms (Male and Female)	280	76.7
Injectables	234	64.1
Vasectomy/TBL	76	20.8

*Multiple responses
**Correct responses

Table 4.3.2 Knowledge of family planning among respondents

Variables	Respondents with the correct answers (n=365)	(%)
	Yes	No
**Contraceptives are drugs or objects used to prevent or delay pregnancy	289	79.2
**Vasectomy is a family planning method that is not reversible	127	34.8
**Vasectomy is a family planning method for men only	124	34.0
**Male and female condoms cannot be used at the same time	289	79.2

*Multiple responses
**Correct responses

Table 4.3.3 Knowledge score on family planning among respondents n=365

Knowledge score (9)	Frequency	(%)
Poor (≤3)	116	31.8
Fair (4-5)	140	38.3
Good (≥6)	109	29.9

Table 4.3.3 Knowledge score on family planning among respondents n=365

Knowledge score (9)	Frequency	(%)
Poor (≤3)	116	31.8
Fair (4-5)	140	38.3
Good (≥6)	109	29.9

4.4 Perception on utilisation of contraceptive services among respondents

In Table 4.4.1, most respondents (61.4%) disagreed on non usage of contraceptive services because of the side effects. Most respondents (88.5%) agreed to using family planning because of its safety. More than half (58.4%) disagreed to usage of family planning because they do not want people to know their HIV status. About 96.2% and 97.0% disagreed on usage of family planning methods because of their religion and cultural beliefs respectively. Hence, 94.0% had the right perception to utilisation of family planning methods (Table 4.4.2).

Table 4.4.1: Perception on utilisation of family planning services among respondents

Perceptions	Respondents with positive perception (n=365)	(%)
I can't use family planning because I am afraid of the side effects	224	61.4
I use family planning because I am sure of it safety	323	88.5
I can't go for family planning because I don't want people to know my HIV status	213	58.4
I can't go for family planning because my religion does not permit it	351	96.2
I can't use family planning methods because my culture does not permit it	354	97.0

Table 4.4.2: Perception score on utilisation of family planning services among respondents

Perception score (5)	Frequency (n= 365)	(%)
Negative (< 3)	22	6.0
Positive (≥3)	343	94.0

4.5.1 Factors which serve as barriers to use of family planning among respondents

Among the factors which serve as barriers to utilisation of family planning methods among the respondents are that a high proportion (55.9%) do not want people to know their HIV status, followed by the fear of antiretroviral drugs reaction with family planning drugs (27.4%) (Table 4.5.1)

Table 4.5.1 Factors which serve as barriers to family planning among respondents (n=365)

Factors	No	%
Fear of antiretroviral drug interactions with family planning drugs	100	27.4
Don't want people to know one's HIV status.	204	55.9
Culture does not permit the utilisation of contraceptive services	14	3.8
Religion negates the use of contraceptives	12	3.3
Cost of contraceptive services	20	5.5
Complications from the usage	56	15.3

* Multiple responses

4.5.2 Antecedent factors promoting the utilisation of contraceptive services among respondents

With regard to factors perceived to promote the utilisation of family planning, 21.6% of the respondents reported "its usefulness for child spacing", followed by "its prevention of unwanted pregnancy" (14.8%).

Table 4.5.2 Antecedent factors promoting the utilisation of family planning services among respondents

Antecedent factors	No	%
Its usefulness for prevention of unwanted pregnancy	54	14.8
It's useful for child spacing	79	21.6
Promote health of the mother	27	7.4
Prevention of infection	19	5.2
To stop child bearing	41	11.2
Prevention of abortion	20	5.5
Proximity to the house	2	.5
Public enlightenment	2	.5
Financial reason	8	2.2

* Multiple responses allowed

4.6 Relationship between socio-demographic characteristics of respondents and knowledge of contraceptive services

Among the respondents demographic characteristics, highest educational qualification was found to be statistically significantly associated with knowledge. Less than half of the respondents with tertiary education had good knowledge of family planning methods compared with respondents who had no formal (33.3%), secondary (26.9%) or primary education (21.7%), p= 0.020 (Table 4.6).

Further analysis revealed that respondents' with primary education were more likely to have poor knowledge of contraceptive compared with those that had secondary and tertiary education (OR= 3.44; 95% CI: 1.62-7.29).

Table 4.6: Relationship between socio-demographic characteristics of respondents and knowledge of family planning methods

Demographic Variables	Knowledge			Total	Chi-square	p-Value
	Poor n (%)	Fair n (%)	Good n (%)			
Sex						
Male	26 (42.6)	17 (27.9)	18 (29.5)	61	4.8	0.090
Female	90 (29.6)	123 (40.5)	91 (29.9)	304		
Age						
≤27	17 (37.0)	16 (34.8)	13 (28.3)	46	11.8	0.158
28-37	47 (26.9)	71 (40.6)	57 (32.6)	175		
38-47	31 (31.3)	41 (41.4)	27 (27.3)	99		
48-57	13 (39.4)	9 (27.3)	11 (33.3)	33		
≥58	8 (66.7)	3 (25.0)	1 (8.3)	12		
Educational status						
Non-formal	9 (30.0)	11 (36.7)	10 (33.3)	30	15.0	0.020
Primary	22 (26.5)	43 (51.8)	18 (21.7)	83		
Secondary	61 (36.5)	61 (36.5)	45 (26.9)	167		
Tertiary	24 (28.2)	25 (29.4)	36 (42.4)	85		
Marital status						
Single	11 (39.3)	7 (25.0)	10 (35.7)	28	8.6	0.198
Married	86 (29.5)	116 (39.7)	90 (30.8)	292		
Divorce/separated	8 (32.0)	11 (44.0)	6 (24.0)	25		
Widowed	11 (55.0)	6 (30.0)	3 (15.0)	20		
Type of family						
Monogamous	69 (30.9)	85 (38.1)	69 (30.9)	223	6.8	0.344
Polygamous	35 (31.0)	42 (37.2)	36 (31.9)	113		
Single parenting	9 (52.9)	7 (41.2)	1 (5.9)	17		
Divorcee/separated	3 (25.0)	6 (50.0)	3 (25.0)	12		
Total	116(31.8)	140(38.4)	109(29.8)	365(100)		

4.7 Relationship between socio-demographic characteristics of respondents and utilisation of contraceptive services

Among the relationship between socio-demographic characteristics of respondents and utilisation of contraceptive services, only educational qualification was statistically significant. A higher proportion (85.5%) of respondents with primary school education used family planning methods compared to those with tertiary (80.0%), secondary (71.3%) and no formal education (63.3%), p= 0.023 (Table 4.7).

In addition, male respondents were less likely to utilise contraceptive services compared to their female counterparts (OR= 0.12; 95% CI: 0.040.36).

Table 4.7: Relationship between socio-demographic characteristics and use of contraceptive services

Demographic Variables	Ever used family planning: Yes n (%)	No n (%)	Total	Chi-square	P-Value
Sex					
Male	51(83.6)	10(16.4)	61(100)	2.4	0.123
Female	226(74.3)	78(25.7)	304(100)		
Age					
≤27	34(73.9)	12(26.1)	46(100)	4.4	0.355
28-37	137(78.3)	38(21.7)	175(100)		
38-47	77(77.8)	22(22.2)	99(100)		
48-57	22(66.7)	11(33.3)	33(100)		
≥58	7(58.3)	5(41.7)	12(100)		
Educational qualification					
Non-formal	19 (63.3)	11 (36.7)	30(100)	9.6	0.023
Primary	71 (85.5)	12 (14.5)	83(100)		
Secondary	119 (71.3)	48 (28.7)	167(100)		
Tertiary	68 (80.0)	17(20.0)	85(100)		
Marital status					
Single	22(78.6)	6(21.4)	28(100)	5.219	1.56
Married	224(76.7)	68(23.3)	292(100)		
Divorce/separated	20(80.0)	5(20.0)	25(100)		
Widowed	11(55.0)	9(45.0)	20(100)		
Type of family					
Monogamous	173 (77.6)	50 (22.4)	223(100)	1.6	0.645
Polygamous	84 (74.3)	29 (25.7)	113(100)		
Single parenting	11 (64.7)	6 (35.3)	17(100)		
Divorce/separated	9 (75.0)	3 (25.0)	12(100)		
Total	75.9	24.1	100		

4.8 Relationship between current use of family planning and socio-demographic characteristics of respondents

Considering the relationship between the socio-demographic characteristics of respondents and current use of family planning methods, age and sex were statistically significant. A high proportion (64.6%) of respondents in the age range of 38-47 years were currently using family planning methods compared to those in the age range 28-37 (58.9%), ≤27(58.7%), and 48-57 (42.4%) years, p= 0.000 (Table 4.8).

Table 4.8: Relationship between socio-demographic characteristics of respondents and current use of contraceptive services

Demographic Variables	Current use of family planning		Total	Chi Square	P-Value
	Yes n (%)	No n (%)			
Sex					
Male	49(80.3)	12(19.7)	61(100)	0.000	0.00
Female	159(52.3)	145(47.7)	304(100)		
Age					
≤27	27(58.7)	19(41.3)	46(100)	0.866	0.00
28-37	103(58.9)	72(41.1)	175(100)		
38-47	64(64.6)	35(35.4)	99(100)		
48-57	14(42.4)	19(57.6)	33(100)		
≥58	0(0)	12(100)	12(100)		
Educational qualification					
Non-formal	13 (43.3)	17 (56.7)	30(100)	0.330	0.12
Primary	49 (59.0)	34 (41.0)	83(100)		
Secondary	90 (53.9)	77 (46.1)	167(100)		
Tertiary	56 (65.9)	29 (34.1)	85(100)		
Marital status					
Single	16(57.1)	12(42.9)	28(100)	0.248	0.64
Married	169(57.9)	123(42.1)	292(100)		
Divorce/separated	17(68.0)	8(32.0)	25(100)		
Widowed	6(30.0)	14(70.0)	20(100)		
Type of family					
Monogamous	129 (57.8)	94 (42.2)	223(100)	0.000	0.81
Polygamous	61 (54.0)	52 (46.0)	113(100)		
Single parenting	10 (58.8)	7 (41.2)	17(100)		
Divorcee/separated	8 (66.7)	4 (33.3)	12(100)		

Table 4.8.1: Relationship between knowledge of family planning and utilization of contraceptive services

Varinbles		Knowledge			Total	P-Value
		Poor n (%)	Fair n (%)	Good n (%)		
Ever used family planning	Yes	80 (28.9)	108 (39.0)	89 (32.1)	277 (100)	0.08
	No	36 (40.9)	32 (36.4)	20 (22.7)	88 (100)	
Current use of family planning	Yes	60 (28.8)	84 (40.4)	64 (30.8)	208 (100)	0.38
	No	56 (35.7)	56 (35.7)	45 (28.7)	157 (100)	

4.9 Relationship between socio-demographic characteristics of respondents and perception of utilisation of contraceptive services

Analysis of the relation between the socio-demographic characteristics of the respondents and their perception of utilization of contraceptive services, showed family type was statistically significant. Respondents raised by a single parent had the highest proportion (11.8%) of those with wrong perception of utilisation of family planning methods compared to those in the polygamous (10.6%), monogamous (3.6%) and in a divorced/separated family (0.0%), p= 0.040 (Table 4.9).

Table 4.9: Relationship between socio-demographic characteristics of respondents and perception to utilisation of family planning methods

Demographic Variables	Perception		Total	Chi-square	P-Value
	Negative n(%)	Positive n(%)			
Sex					
Male	2 (3.3)	59 (96.7)	61	1.0	0.323
Female	20 (6.6)	284 (93.4)	304		
Age					
≤27	4 (8.7)	42 (91.3)	46	4.2	0.384
28-37	8 (4.6)	167 (95.4)	175		
38-47	6 (6.1)	93 (93.9)	99		
48-57	4 (12.1)	29 (87.9)	33		
≥58	0 (0.0)	12 (100.0)	12		
Educational Qualification					
Non-formal	2 (6.7)	28 (93.3)	30	2.0	0.563
Primary	3 (3.6)	80 (96.4)	83		
Secondary	13 (7.8)	154 (92.2)	167		
Tertiary	4 (4.7)	81 (95.3)	85		
Marital status					
Single	1 (3.6)	27 (96.4)	28	0.6	0.961
Married	19 (6.5)	273 (93.5)	292		
Divorced/separated	1 (4.0)	24 (96.0)	25		
Widowed	1 (5.0)	19 (95.0)	20		
Type of family					
Monogamous	8 (3.6)	215 (96.4)	223	8.3	0.040
Polygamous	12 (10.6)	101 (89.4)	113		
Single parenting	2 (11.8)	15 (88.2)	17		
Divorced/separated	0 (0.0)	12 (100.0)	12		
Total	6.0	94.0	100		

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Socio-demographic characteristics of respondents

The age of respondents ranged from 18-58 years with a mean age of 36.6 ± 8.9 years, an age structure which buttressed the fact that HIV/AIDS affects all populations irrespective of age. The majority of PLWHA in the study were in the age group 18-47 years, implying that most of them were in their most productive and reproductive years. This finding is consistent with that of Anyebe, Hellandendu and Gyong (2013) which revealed that the majority (72.7%) of PLWHA in their study were in the age group of 15 to 44 years (with a mean age of 38.3 years). Other studies have also implicated the productive age group in HIV prevalence. Adekeye (2005) reported that adolescents and youths remain the major propellers and casualties of the pandemic, while Gallagher (2002) earlier reported that the HIV infection rate is highest among individuals from 19 to 35 years. According to him, this portends danger for the population structure as the younger people will die, leaving behind orphans who are usually cared for by older ones who are themselves dependents.

The majority of the respondents in this study were female because the clinic runs PMTCT services. In line with this finding, HIV-ACTION (2009) reported that the most vulnerable segments of the population, that is, women and young children, constitute the majority of those infected with the virus. Hellandendu (2001) referred to vulnerable groups as "those who are politically and economically disadvantaged" and linked the propagation of HIV/AIDS to political and economic dominance-subservience relationships, and the emergent deviant sex subculture in developing countries. According to him, political and economic situations that force young people, mostly females, into transactional sex or outright prostitution as a means of livelihood contribute significantly to the high prevalence of the disease in many communities.

It is not surprising that most of the respondents were from the Yoruba ethnic group since the study was conducted in Ibadan, a city predominantly inhabited by this ethnic group

Comparable to the result of this study, the NDHS reported an almost equal proportion of Muslims (45%), Christians (54%) and traditionalists (1%). There was an affinity for monogamy among the respondents, a deviation from the traditional value system of polygyny that had hitherto been common in Nigeria and sub-Saharan Africa but which has persistently declined substantially (Hayase and Liaw, 1997). This decline in polygyny was also reported in the NDHS with regional differences in its practice and more prevalence in the rural than in urban areas (NPC and ICF Macro, 2009). The finding of the study by Anyebe et al, (2013) is consistent with that of this study that the highest proportion of PLWHA had secondary education.

5.2 Family planning awareness, use and accessibility

All the participants had heard of family planning, a finding which is consistent with the result of the study conducted by Berhane et al. (2013) which revealed that all their participants were aware of at least one modern contraceptive. The authors also found that the most commonly used contraceptive method was the condom, a finding which is the same as in this study. The condoms are a type of contraceptive that offer dual protection; apart from being effective in preventing pregnancies, they also help to prevent STI/HIV.

The result that one-third (33.4%) of the respondents heard about FP from health workers implies that some form of health worker-PLWHA health education was ongoing. This is a notable finding because it is imperative for PLWHA and indeed the general populace to have accurate information and understanding about their health status; this onus invariably lies on health workers.

Generally, the prevalence of family planning use among the respondents in this study was quite high when compared with that of the general population (NPC and ICF Macro, 2009). This finding is consistent with the 87.3% prevalence of FP use that was reported by Egessa (2010). The different methods of FP currently being used by respondents were also similar to that reported in Egessa's study and they included both the modern (IUD, condom, injectables, implants and pills) and the traditional methods. To support this trend, the National Guidelines for Family Planning Services (2011) in Berhane et al. (2013) revealed that the prevalence of

modern contraceptives in HIV-positive women is expected to become higher than in the general population to avert vertical and horizontal transmission of the virus. The commonly used methods of contraception among respondents at the time this study was conducted were condoms and injectables; a finding which is consistent with that of Mutiso, Kinuthia and Qureshi (2008) and Nattabi et al. (2011). The choice of the condom can be explained by the convenience with which the condom can be procured over the counter (easy accessibility and availability), while the choice of injectable contraceptives may be explained in terms of the privacy; women only have to go to a service delivery point every two to three months and can do so without their partner's knowledge, should they disapprove. The lower percentage of use of hormonal contraceptives compared to condoms can be explained by the side effects that often accompany their use.

In sub-Saharan Africa, the epicenter of the HIV epidemic, effective HIV prevention and care strategies for PLWHA remain a challenge. It is therefore an encouraging finding that most of the respondents in this study reported that they had access to family services with a high proportion reporting access to condoms in the clinic. This finding indicates that there is no aversion to FP services delivery for PLWHA. Access to FP is of great significance among PLWHA for reasons of unplanned pregnancies, and negative effects of pregnancy on their health, which leads to poor obstetric outcomes and rapid progression of HIV. In addition, lack of FP access for PLWHA contributes to new paediatric HIV infections through vertical transmission. There is thus a vicious cycle of unregulated fertility, re-infection of HIV and suffering among PLWHA related to effects of HIV. Effective utilization of FP services by PLWHA can help address such emerging public reproductive health concerns and improve maternal and child health outcomes in general (World Health Organization, 2006).

Findings from this study revealed a significant relationship between level of education and use of FP. Significantly, more respondents who had formal education had used FP compared to those who had only non-formal education. This result is consistent with that of Rob et al. (2007) and Nattabi et al. (2011). Nattabi et al. revealed that 42.9% of PLWHA who had formal education were currently using a family planning method compared to 20.0% FP use reported for those who had no formal education.

5.3 Knowledge of family planning

Only 29.9% of respondents in this study had good knowledge of FP; a finding which is contrary to that of Ikenna (2014) which demonstrated a high level of knowledge among HIV-positive women. Noteworthy is the finding that the majority of respondents knew that contraceptives are drugs used to prevent or delay pregnancy. According to Harvey (2005) and WHO (2006), contraceptives are drugs used to achieve family planning which is the means of avoiding pregnancy despite sexual activity.

Consistent with the finding of this study in which condoms (male and female) (76.7%) were the most commonly known method of family planning is the result of the study conducted by Nattabi et al. (2011) which showed that most PLWHA knew about the male condom. Other commonly known methods reported by Nattabi et al. that were consistent with this study were injectables and pills.

Only one-third of the respondents knew that vasectomy is a method of FP that is irreversible (34.8%) and meant for men only (34.0%). According to Sokal and Labrecque (2009), modern vasectomy techniques were developed as a component of family planning services in the 1960s and 1970s. Its effectiveness may be defined by the absence or occurrence of pregnancy (contraceptive effectiveness) or by the results of semen analyses (occlusive effectiveness). It is a surgical permanent method of contraception which is exclusively performed on men and is simple, fast, safe, less expensive, requires little time off work and necessitates local rather than general anaesthesia (Trussell, Lalla and Doan, 2009; Shurlip et al. 2012). The operation is done to keep a man's sperm from going to his penis, so his ejaculate does not have any sperm in it that can fertilize an egg (Center for Disease Control and Prevention, 2014)

It is noteworthy that the majority of respondents in this study knew that the male and female condoms cannot be used at the same time. According to the World Health Organization and UNAIDS (2000), male and female condoms should not be used together or simultaneously as friction between the plastic and the latex rubber can result in either product failing. The friction occurs due to inadequate lubrication resulting in either or both condoms slipping or

tearing, and the outer ring of the female condom being pushed inside the vagina; with such occurence, the essence of the contraceptive use may be lost.

Knowledge of family planning was highest among PLWHA who had tertiary education. This finding indicates that education has an important role to play in being knowledgeable about FP probably because people who are educated can read and understand on their own without being fully dependent on obtaining information from health workers.

5.4 Perception of family planning utilisation

It is noteworthy that most of the PLWHA in this study perceived the use of family planning positively. One important reason as asserted by Ikeora (2014) could be the positive living counselling that PLWHA generally receive on the importance of family planning. Another reason could be the fact that people receiving HIV treatment and care have more regular contact with health care professionals as a function of the clinical follow-up required in monitoring the health of HIV-positive individuals. During these regular clinic visits, reproductive and sexual health issues are raised and the opportunity to discuss and commence use of contraception is presented.

Although almost sixty percent of the respondents disagreed with the statement that "they cannot go for FP because they do not want their HIV status to be known by other people. It is however quite disheartening that many of them (41.6%) would not take up FP because of their HIV status. The reason for this perception is not unrelated to the stigma associated with being HIV positive.

Even though concerns for health and side effects are two of the most commonly expressed reasons for non-use and for discontinued use of contraception (The Population Council, 2012), it is heartening that the majority of the participants in this study perceived that family planning is safe to use and that the fear of side effects cannot preclude their use of family planning. With adequate training of service providers, access to appropriate equipment and drugs and well informed users, side effects are reportedly rare (The Population Council, 2012).

More respondents who were in monogamous families and those who were divorced/separated had positive perception towards utilization of FP compared to those in polygamous families and single parenthood. It is noteworthy that people who are divorced or separated perceive FP use positively because they may be sexually active without being in a stable relationship and would require contraceptives to protect themselves from sexually transmitted infection. On the other hand, it is dismal that those who practice polygamy and single parenting perceive FP negatively. These categories of people may be at greater risk of infection because they are likely to be involved in sexual encounters with more than one person.

5.5 Factors influencing use of family planning

Only a few of the respondents reported that their culture does not permit the use of family planning. To buttress this finding, Iliyasu et al. (2009) reported a trend in the decline of cultural resistance to the utilization of contraceptives.

Iliyasu et al. further stated that presently with the HIV/AIDS epidemic, the resistance is slowly giving way and HIV/AIDS has evidently increased the use of contraception. For instance, the proportion of HIV positive women using modern contraceptives was 34.5% compared to 17.5% among HIV-negative women in Yaoundé, Cameroon (Ross et al., 1999) and 20.3% compared to 14.8% in Ndola, Zambia (Ruttenberg, Biddlecom and Kaona, 2000). This increased contraceptive use was for HIV-infected women to meet their objective of reducing their family sizes (Iliyasu et al., 2009).

It is disheartening that more than half of the respondents had concerns about disclosure of their HIV status which may be necessitated if they decide to utilise family planning services. This concern implies the existence of stigma associated with HIV/AIDS. This finding is counteractive to the health of PLWHA, particularly women who are pregnant or considering pregnancy. Masi (2007) stated that these women face stigma and discrimination from health care workers, such as not receiving supportive care, hence they are not able to freely make informed choices on contraception. Fear of side effects and cost of procurement were also noted as hindrance to family planning utilisation in this study as well as the study conducted by Iliyasu et al. (2009).

Contrary to the finding in which few (5.2%) respondents stated that efficaciousness of family planning in preventing infection is a factor that promotes family planning use, the study conducted by Thwala (2011) revealed that the majority (83%) of PLWHA use family planning to prevent infection. Thwala (2011) and Cohen (2008) further stated that the right reason that should motivate PLWHA to use contraceptives is to prevent re-infections and new infections to partners. More (14.8%) respondents stated that the effectiveness of family planning for pregnancy prevention is n factor that promotes its utilization compared to those that reported its effectiveness in the prevention of infection (5.2%). The study by Thwala (2011) similarly revealed that 12% of the respondents used contraceptives because they wanted to prevent getting pregnant. To support this finding, Mitchell and Stephens (2004) stated that PLWHA may use contraception but not for preventing infection but to prevent pregnancy. This category of respondents who choose contraception only to prevent pregnancy raises concern as they may not fully protect themselves and may not choose the right contraception methods for their HIV status.

One-third of the PLWHA in this study reported that FP's usefulness for child spacing and to stop child bearing altogether promotes its utilization. Not desiring to have children may strongly influence the use of contraception by increasing its uptake. The health of the mother was also reported as one of the factors promoting use of FP among PLWHA; a finding which may be related to the need to prevent pregnancy from occurring thereby favouring FP uptake. It is important therefore that PLWHA, particularly discordant couples, are equipped to make informed choices on the appropriate FP method to use based on their health status.

5.6 Implications of findings for reproductive health education

The results of this study revealed a deficit in knowledge about family planning. The promotion of family planning services among HIV-positive people can prevent infection, STIs including HIV, and pregnancy. Moreover, if a couple chooses a barrier method contraceptive use will prevent or slow down transmission of the virus from one partner to the other. Information about contraception is a major determinant of positive attitude towards family planning methods adoption and sustained contraceptive use. Hence, health workers are required to educate PLWHA on family planning through counselling. Family planning

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services and counselling for PLWHA can also be incorporated into the anti-retroviral therapy programme in the hospital in order to overcome the obstacles associated with stigma and discrimination which hinder the utilisation of family planning. Leon et al. (2001) stated that family planning counselling implies that health workers should also assist clients in selecting an appropriate contraceptive method that best satisfies their needs and that clients leave the counselling session knowing about the side effects of the chosen method and how to use it safely and effectively. This knowledge, according to the authors (Leon et al., 2001) is a major determinant of continued adherence to contraceptive use by clients.

Only one-third of the respondents were currently using condoms. Condoms provide dual protection which is particularly needed by PLWHA. They are effective in protection against pregnancy and if used consistently and correctly they are also the most effective means of preventing the sexual transmission of HIV (Mitchell and Stephens, 2004). Limited side effects have been documented on condoms. Users may be allergic to the latex condoms, but alternative kinds of condoms can be used (Ijang'o, 2010). Respondents therefore need to understand the importance of promotion of condoms in stable relationships, especially among PLWHA where there is a need for long-term adherence to safer sex (Coles and Steiner, 2002). This understanding can be achieved by providing them with relevant theoretical and practical information that will highlight the dual protection advantages of the condom over other contraceptive methods.

As stated by Delvaux and Nostlinger (2007), protection against both unwanted pregnancy and STIs is referred to as dual protection. Condoms are the mainstay of dual protection in combination with other methods. The use of dual methods for contraception increases protection for couples, as men are often unwilling to use condoms, this second method then provides protection against unwanted pregnancy. The dual protection method should be promoted especially for PLWHA who have received HIV education and who are aware of their elevated risk of contracting STIs. The use of dual methods of contraception is reported to be low among PLWHA with the rates ranging between 12% - 21 % (Sama et al., 2008; Myer, Rebe and Morroni, 2007). The challenge therefore is the promotion of more than one method to achieve dual protection when some people are finding it difficult to use even a single

method. This challenge can be surmounted by educating respondents through emphasis on the need to bear some minor inconvenience in order to stay alive.

A reproductive health study conducted by WHO (2008) revealed that due to the lack knowledge on the available contraceptive methods, people are not able to make informed choices as far as contraceptives are concerned, resulting in fear to utilize them. However, Kansen, Vaughan and Walter (1992) asserted that knowledge has little effect on risk reduction strategies. Results indicated that a high degree of knowledge of contraception was present among adolescents but they lacked the social skills of communication, negotiation and personal control in sexual situations. Similarly, in a study conducted in Kenya by Sama et al. (2008), people on highly active anti-retroviral therapy (HAART) reported that knowledge of their HIV status did not act as a protective factor for reduced sexual risk behaviour. The implication of this – especially among adolescents – is a continuous spread of HIV among positive persons and even to persons who are negative for the virus. Hence, life building skills that will emphasize skills such as refusal, negotiation, assertiveness, decision making and communication should be incorporated into the school curriculum in order to stop this trend.

5.7 Conclusions

This study investigated the family planning awareness, knowledge and accessibility among PLWHA at the PEPFAR clinic in Adeoyo Maternity Hospital, Ibadan. It also explored the perception of use, pattern of use and factors influencing use of family planning. All the respondents were aware of family planning, the level of knowledge was majorly fair and poor and family planning was generally accessible to the respondents.

Most of the respondents had positive perception towards utilisation of family planning. majority had used a family planning method and condom was the predominant method ever used as well as currently used. Factors promoting the utilisation of family planning services were its effectiveness for child spacing, prevention of pregnancy and halting of child bearing altogether. Fear of HIV status disclosure, anti-retroviral drug interaction with family planning drugs and side effects were the hindering factors in family planning utilisation among the respondents.

5.8 Recommendations

1. Contraceptive education that will improve respondents' knowledge and address the factors hindering the utilisation of family planning should be comprehensively integrated into the anti-retroviral therapy programme in the hospital both for individuals and groups. The large number of PLWHA attending the PEPFAR clinic weekly is an opportunity that will help to collectively reach a large number of them simultaneously while individual education will provide opportunity for particular focus on each client's needs. The education should also underscore factors that promote the utilisation of family planning.

2. Due to the documented stigma and discrimination associated with being positive for HIV in this study, continuous education of the general public is required so that they are encouraged to associate freely with PLWHA.

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APPENDIX I

QUESTIONNAIRE

UTILISATION OF CONTRACEPTIVE SERVICES AMONG PEOPLE LIVING WITH HIV/AIDS AT THE PRESIDENT'S EMERGENCY PLAN FOR AIDS RELIEF CLINIC ADEOYO MATERNITY TEACHING HOSPITAL, IBADAN, NIGERIA

Dear respondents,

Good day, I am Giwa Boshirat Abiola. I am a student of the Department of Health Promotion and Education, the Faculty of Public Health, College of Medicine, University of Ibadan. I write you to participate in the above titled research. The purpose of the study is to learn about the utilisation of family planning services among PLWHA at the PEPFAR clinic of Adeoyo M.T.H. The findings from this study will help in increasing the acceptance and utilization of family planning by PLWHA.

Your participation is voluntary, also note that there is no wrong or right answers to the questions you are being asked. Your responses will be kept confidential as no name is required in filling the questionnaire. Please give honest responses to the questions I will ask you as much as possible without holding back any information.

You are free to ask questions as the interview progresses.

Thank you.

SECTION A – DEMOGRAPHIC DATA, Please tick the appropriate answer.

1. Age in years (last birthday)_____

2. Sex Male ☐ Female ☐

3. Marital status (1) Single ☐ (2) Married ☐ (3)Divorced/Separated ☐
(4) Widowed ☐

4. Educational qualification

(1) No formal education ☐ (2) Primary School ☐

(3) Secondary school ☐ (4) University degree ☐

(5) Others (Specify).....

5. Occupation

(1) Civil Servant ☐ (2) Self employed ☐ (3) Full Housewife ☐

(4) Unemployment ☐

6. Religion

(1) Christianity ☐ (2) Islam ☐ (3) Traditional ☐ (4) Others (specify).....

7. Ethnicity (1) Yoruba ☐ (2) Hausa ☐ (3) Igbo ☐ (4) Others.....

8. Type of Family: Monogamous ☐ Polygamous ☐ (3) Single Parenting ☐

(4) Divorced/Separated ☐

Section B. Knowledge of PLWHA on Contraceptives

9. List five methods of family Planning you know?

1	IUD
2	Oral Pills
3	Condoms (Male/Female)
4	Injectables
5	Vasectomy/BTL

10. Contraceptive are drugs or object used to prevent or delay pregnancy?

Yes	
No	

11. Vasectomy is a family planning methods that is reversible?

Yes	
No	

12. Vasectomy is a family planning method for men only?

Yes	
No	

13. Male and female condom can be used at the same time

Yes	
No	

Section C –Perception of PLWHA on utilisation of available family planning method

14. I can't use family planning because I am afraid of the side effect.

Agree	
Disagree	
Undecided	

15. I don't use family planning because I am not sure of it safety.

Agree	
Disagree	
Undecided	

16. I can't go for family planning because I don't want people to know my HIV status

Agree	
Disagree	
Undecided	

17. I can't use family planning methods because my religion does not permit it

Agree	
Disagree	
Undecided	

18. I can't use family planning methods because my culture does not permit it

Agree	
Disagree	
Undecided	

Section D-Proportion of PLWHA using Contraceptives

19. Have you heard of family planning before?

Yes	
No	

20. Have you ever used any family planning method before?

Yes	
No	

21. Which method have you used previously?

1	IUD	
2	Oral contraceptives pills	
3	Barrier method: condoms (Male and Female)	
4	Injectables	
5	Natural method	
6	Implant	
7	Sterilization	

22. Which method are you using presently?

1	IUD	
2	Oral contraceptives pills	
3	Barrier method: condoms (Male and Female)	
4	Injectables	
5	Natural method	
6	Implant	
7	Sterilization	

23. What are your sources of information?

1	Radio	
2	Television	
3	Health worker	
4	Friend	

24. Is family planning accessible to PLWHA in this clinic?

Yes	
No	

25. What types of methods are available in the clinic? Tick as many as possible.

1	Dispensing of condom (male & female)	
2	Pills	
3	Injectables	
4	IUCD insertions	
5	Implant	

Section E-Factors promoting utilisation of family planning among PLWHA

26. In your own words, what will make you to utilize family planning service?

.....

.....

Section F-Factors hindering utilisation of family planning among PLWHA

27. Fear of anti-retroviral drug interactions with family planning drugs makes me not to be interested in adopting a method

Yes	
No	

28. I would not want many people to know my HIV status.

Yes	
No	

29. My culture does not permit the utilisation of Family planning method.

Yes	
No	

30. My religion negates the use of contraceptives.

Yes	
No	

31. Family planning will be an additional cost on me.

Yes	
No	

32. Complications from the usage prevent me from adopting a method.

Yes	
No	

APPENDIX II

IWE IBEERE

LILO AWON ONA FIFETOSI OMO BIBI LARIN AWON TI NGBE PELU ARUN KOGBOOGUN NI ILE-ITOJU PEPFAR TI ILE-IWOSAN AKEKO AGBEHI NI ADEOYO, IBADAN

Oludahun tooto,

Mo kiyin pupo, oruko mi ni GIWA Bashirat Abiola, akeko igboye-keji lati Imo Ipolongo Ilera Eda, ti Eka Ilera Gbogbogbo, ni Unifasiti ti Ilu Ibadan.

Mo nroyin latikopa ninu iwadi oke yi. Idi iwadi yi ni lati mo bi wonse nlo awon ona FIFETOSI OMO BIBI larin awon ti ngbe pelu arun kogboogun ni ile-itoju PEPFAR ti ile-iwosan akeko agbebi ni Adeoyo, Ibadan. Awon abajade iwadi yi yo ranwalowo fun piposi ni gbigba ati lilo eto FIFETOSI OMO BIBI larin awon ti wongbe pelu arun kogboogun.

Didasi yin je alinulindo se, ki esi nto pe kosi awon idahun ti kotona abi otona si awon ibeere a ba bi yin. Awon idahun ti e ba funwa yio wa ni ipamo, alipe a ko nilo oruko yin kiko sori iwe yi. E jowo efunwa ni idahun tooto si okokan awon ibeere ti n o ma biyin lalai fi ikankan pamo.

E si ni anfani lati bere nkobaruyin loju bi iwadi yi se nlesiwaju

Modupe pupo.

EKA A: IDANIMO OLUKOPA IWADI

E jowo e maaki idahun ti o ba okokan awon ibeere isale yi ma.

1. Omo odun melo niyin (ni ojo ibi tokoja)? .....
2. Ipo Eda wo ni yin? 1. Okunrin ☐ 2. Obinrin ☐
3. Ipo ibagbe yin? 1. Apon nimi ☐ 2. Moulokunrinawo ☐ 3. Kora'tuka ☐
   4. Opo binrinkunrin Ngbepo ☐
4. Ile iwe wo ni elo? 1. Nkolo ile-iwe ☐ 2. Ile-iwe alakobere ☐ 3. Ile-iwe giga ☐
   4. Ile-iwe giga ☐ 5. Omiran (yalaye) .....
5. Ise wo ni e nse? 1. Osise ijoba ☐ 2. Onise-adani ☐ 3. Iyawo ile nikan ☐
   4. Nkose ise kankan ☐

6. Esin wo ni esin ti e nsin? 1. Igbagbo ☐ Musulumi ☐ Esin abalaye ☐
4. Omiran (se alaye)?.....

7. Eya wo niyin? 1. Yoruba ☐ 2. Hausa ☐ 3. Igbo ☐ 4. Omiran (se alaye).....

8. Iru ebi yi/iru molebi yi? 1. Oko kan ati aya kan ☐ 2. Oko kan ati aya pupo ☐
3. Nikan toju omo ☐ 4. Tikoni/Ituka ☐

EKA B: IMO AWON TI N GBE PELU ARUN KOGBOOGUN LORI IFETOSOMOBIBI

9. Dahun awon ona fetosomobibi marun ti e mo?

1	Ti dokita ba ti nkan bo oju ile-omo obinrin ti ko si ni ni oyun	
2	Lilo awon oogun onihoro ti won fi ndena oyun nini	
3	Lilo ona idabobo okunrin/obinrin lati dena oyun nini	
4	Ti obinrin ba ngun abere ni igbadegba ti ko si ni ni oyun fun osu meji abi meta	
5	Ti dokita ba ti gbe apo omo jade	

10. Fetosomobibi je awon oogun abi nkan ti won ma nlo lati dena abi da oyun nini duro?

Beeni	
Beeko	

11. Gbigbe apo omo jade je ona fetosomobibi toni idahun

Beeni	
Beeko	

12. Gige nkan ti opese omo je ona idena omo bibi fun okunrin nikan?

Beeni	
Beeko	

13. Lilo ona idabobo okunrin ati obinrin lati dena oyun nini se lo ni ekan naa

Beeni	
Beeko	

EKA D: PIPOSI AWON TO NLO AWON OHUN IDENA OYUN LARIN AWON TI NGBE PELU ARUN KOGBOOGUN NI ILE-ITOJU

14. Nje etigbo nipa ifeto si omo bibi ri?

Beeni	
Beeko	

15. Nje etilo ikankan ninu ona ifeto si omo bibi ri?

Beeni	
Beeko	

16. Iru ona wo ni etilo laipe seyin?

1	Ti Dokita ba ti nkan bo oju ile-omo obinrin ti ko si ni ni oyun	
2	Lilo awon oogun onihoro ti wonfi ndena oyun nini	
3	Lilo ona idabobo okunrin/obinrin lati dena oyun nini	
4	Ti obinrin ba ngun abere ni igbadegba ti ko si ni ni oyun fun osu meji abi meta	
5	Lilo eto fetosomobibi ti ibile	
6	Ti dokita ba fi nkan sinu ona eniyan ti inu obinrin be kosi ni ni oyun mo	
7	Sise ise abe fun eniyan ti kosinile ni oyun/bi omo mo	

17. Iru ona FIFETOSI OMO BIBI wo ni e nlo lowolowo?

1	Ti Dokita ba ti nkan bo oju ile-omo obinrin ti ko si ni ni oyun	
2	Lilo awon oogun onihoro ti wonfi ndena oyun nini	
3	Lilo ona idabobo okunrin/obinrin lati dena oyun nini	
4	Ti obinrin ba ngun abere ni igbadegba ti ko si ni ni oyun fun osu meji abi meta	
5	Lilo eto fetosomobibi ti ibile	
6	Ti dokita ba fi nkan sinu ona eniyan ti inu obinrin be kosi ni ni oyun mo	
7	Sise ise abe fun eniyan ti kosinile ni oyun/bi omo mo	

18. Nibo ni eti gbo/mo iru ona ti c nlo yi?

1	Ori redio	
2	Ori telilisan	
3	Odo onise eti ilem	
4	Enu oti	

19. Nje eto fetosomobibi wa fun awontingbe pelu arun kogboogun ni ile-itoju yi bi?

Beeni	
Beeko	

20. Iru eto idena oyun wo ni anfani re wa ni ile itoju yi?Mathi awon eyi ti o ba ba ibeere re mu.

1	Lilo ona idabobo okunrin/obinrin lati dena oyun nini	
2	Lilo awon oogun onibora ti wonfi ndena oyun nini	
3	Ti obinrin ba ngun abere ni igbadegba ti ko si ni ni oyun fun osu meji abi meta	
4	Ti Dokita ba ti nkan bo oju ile-ame obinrin ti ko si ni ni oyun	
5	Ti dokita ba fi nkan sinu apa eniyan ti iru obinrin be kosi ni ni oyun	

EKA E: ERO AWON TI NGBE PELU ARUN KOGBOOGUN LORI LILO AWON ETO IFETOSI OMOBIBI

21. Nkoleto eto fetosomobibi eru ewu re nhami.

Farumo	
Nkofarumo	
Nkoleso	

22. Nkilo eto fetosomobibi toripe nkomo bi ose dara si.

Farumo	
Nkofarumo	
Nkoleso	

23. Nko le lo fun eto fetosomobibi toripe nkofe ki awon eniyan ki o mo ipo kokoro arun kogbogbun mi

Farumo	
Nkofarumo	
Nkoleso	

24. Nko le lo fun eto fetosomobibi toripe esin mi kofi aye re sile

Faramo	
Nkofaramo	
Nkoleso	

25. Nko le lo fun eto fetosomobibi toripe asa mi kofi aye re sile.

Faramo	
Nkofaramo	
Nkoleso	

EKA E: AWON OHUN IDENA SI LILO AWON ONA FIFETOSI OMO BIBI LARIN AWON TI NGBE PELU ARUN KOGBOOGUN

26. Ni awon ero yin, kinni ole mun yin lo eto fetosomobibi?..

....

EKA E: AWON NKAN TI ORANLILO AWON ONA FIFETOSI OMO BIBI LARIN

27. Iberu lilo awon oogun arun kogbogun pelu ti idena oyun mun mi latimani ifesi okankan ninu eto fifietosomobibi.

Beeni	
Beeko	

28. nko fe ki enikonkon mo ipo arun kogbogun mi.

Beeni	
Beeko	

29. Asa mi kofi ona lilo eto ifetosomobibi sile.

Beeni	
Beeko	

30. Esin mi kuna lilo okankan ninu ona eto fetosomobibi

Beeni	
Beeko	

31. Eto FIFETOSI OMO BIBI mu Jo atikun si inawo mi.

Beeni	
Beeko	

32. Ijamba toromo lilo fetosomobibi lemi ni lati mayan okankan ninu awon eto fetosomobibi.

Beeni	
Beeko	

APPENDIX III

ETHICAL APPROVAL LETTER

TELEGRAMS.....

TELEPHONE.....

MINISTRY OF HEALTH

HEADQUARTERS, RESEARCH & STATISTICS DIVISION

PRIVATE MAIL BAG 003, GOVT. OF OYO STATE OF NIGERIA

Your Ref. No. .....

All communications should be addressed to the Honourable Commissioner quoting

Our Ref. No. AD 13/ 479/fjil

15th May, 2013

The Principal Investigator,
Department of Health Promotion and Education,
Faculty of Public Health,
University of Ibadan,
Attention: Giwa Bashirat A.

Ethical Approval for the Implementation of your Research Proposal in Oyo State

This acknowledges the receipt of the [illegible] version of your Research Proposal titled "Utilization of Family Planning Services among People Living with HIV/AIDS at the PLWHA Clinic of Adeoyo State Hospital, Yemetu, Ibadan Nigeria."

2. The committee has noted your compliance with all the ethical concerns raised in the initial review of the proposal in this regard. In view of this, I am pleased to convey to you the approval of committee for the implementation of the Research Proposal in Oyo State, Nigeria.

3. Please note that the committee will monitor closely and follow up the implementation of the research work. However, the Ministry of Health would like to have a copy of the results and recommendations of the findings as this will help in policy making in the health sector.

4. Wishing you the best

Sola [illegible]
Director, Planning, Research & Statistics
Secretary, Oyo State Research Ethical Review Committee